

The Consideration of Archaeological Sites in Oil and Gas Drilling Operations

Amanda M. Evans, Tesla Offshore, LLC
Matthew E. Keith, Tesla Offshore, LLC

UNESCO Meeting
December 14, 2011
Brussels, Belgium



Northern Gulf of Mexico, USA



Notable
Dates:

1937

1947

1973

1986

Typical Geophysical Sensor Suite



Edgetech FS-2400
Sidescan Sonar
120-410 kHz (Chirp)



Marine Magnetics
SeaSpy Magnetometer
2 Hz sampling rate

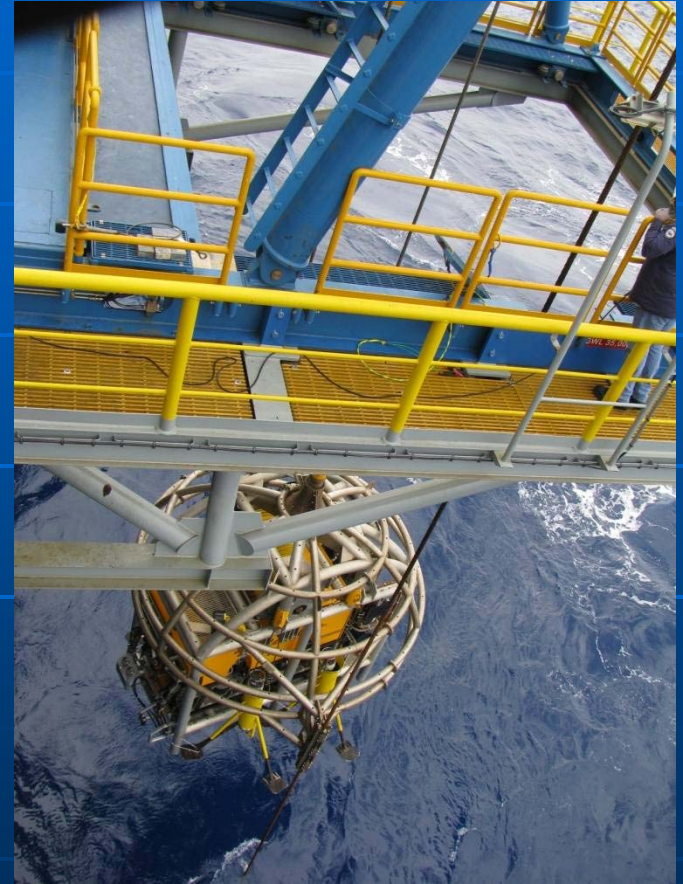
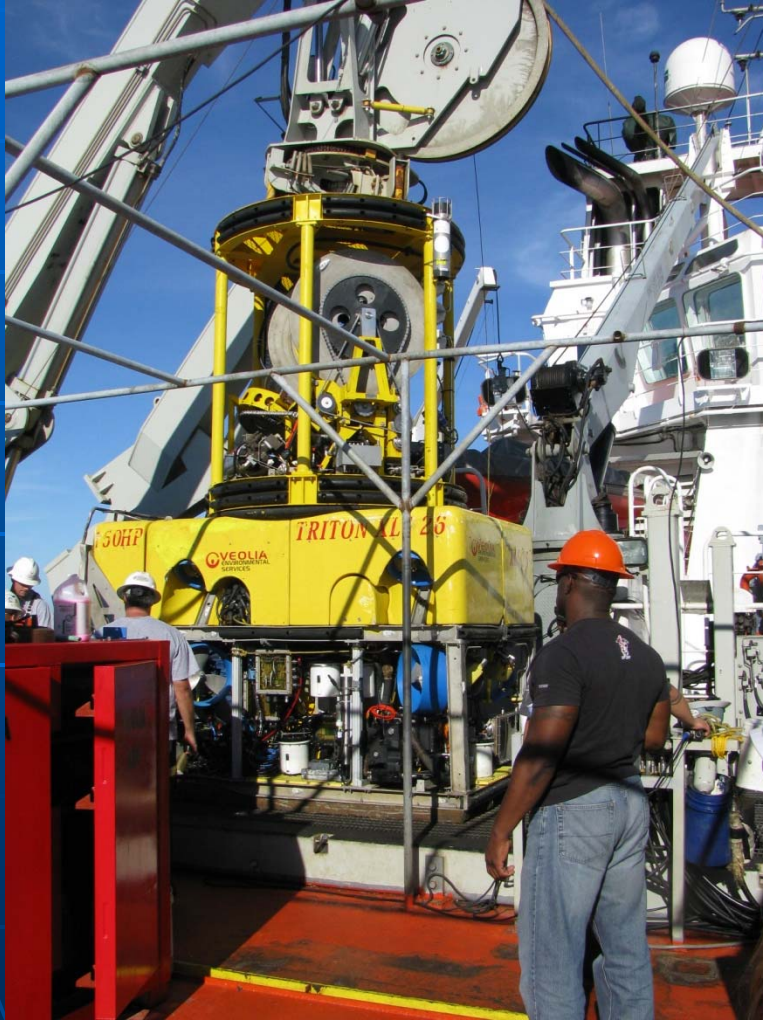


Edgetech SB-216S
Subbottom Profiler
2-16 kHz (Chirp)

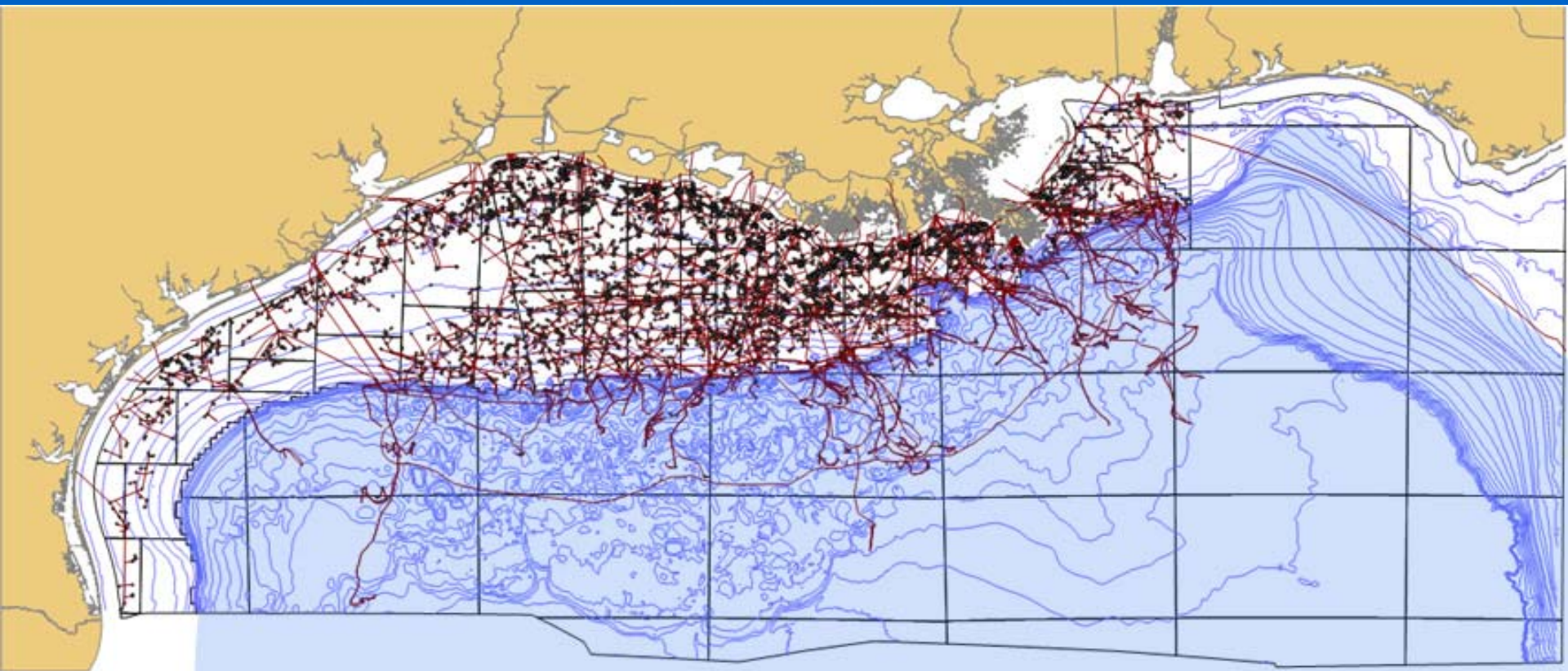


R2 Sonic Multibeam
Echosounder
200-400 kHz

Supplemental Archaeology Survey



Shallow to Moderate Water Depths

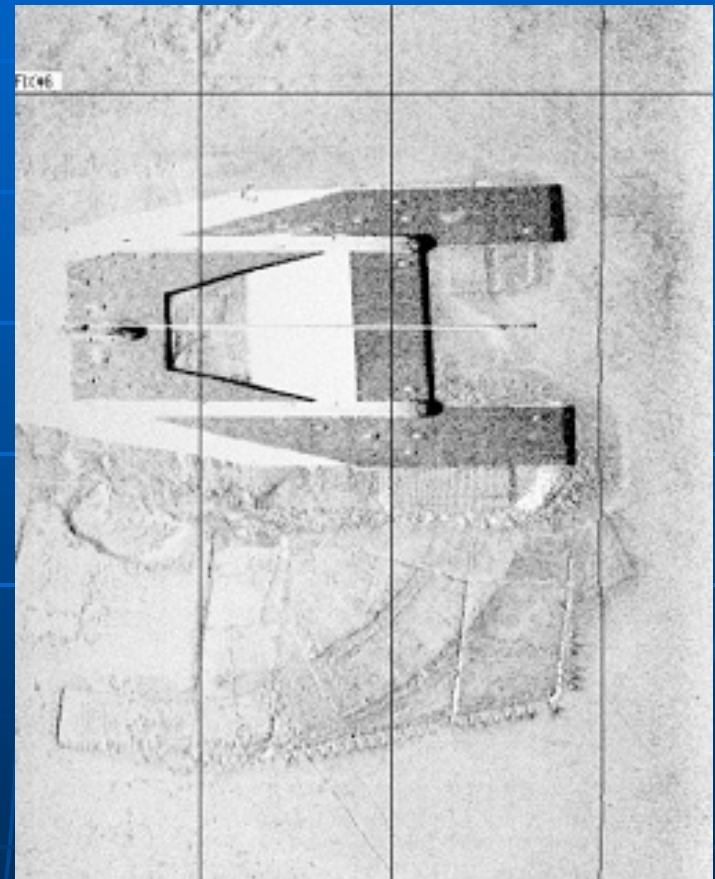


Deep to Ultra-deep Water

Jack-Up Drilling Rigs



Mat-supported Jack-up Rig



Deep and Ultra Deep Water Drill Rigs



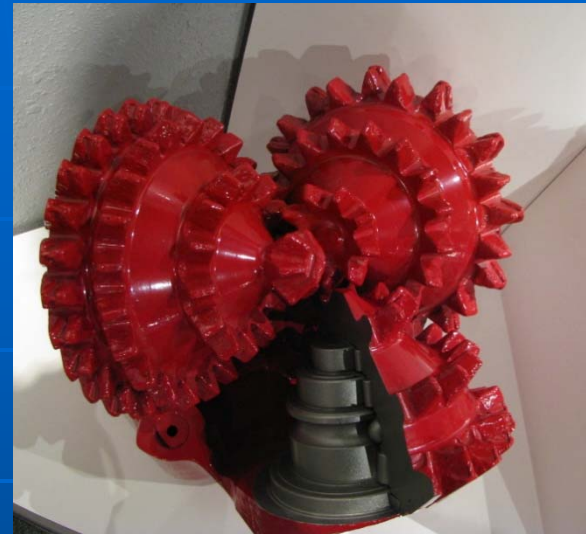
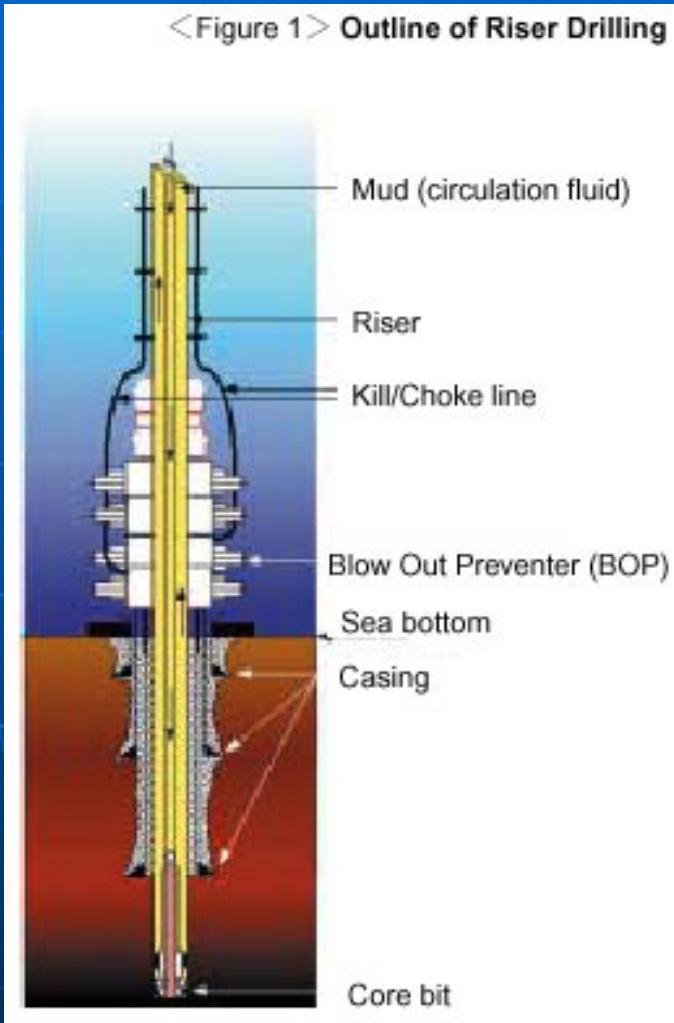
Top (both): Enscos 8502 DP Semi-Submersible Drill Rig (Courtesy Enscos)

Bottom (left): Discoverer Deep Seas DP Drill Ship (Rig Zone)

Bottom right): Transocean Deepwater Nautilus Moored Semi-Submersible Drill Rig (Courtesy Transocean)

Well Drilling Operations

<Figure 1> Outline of Riser Drilling

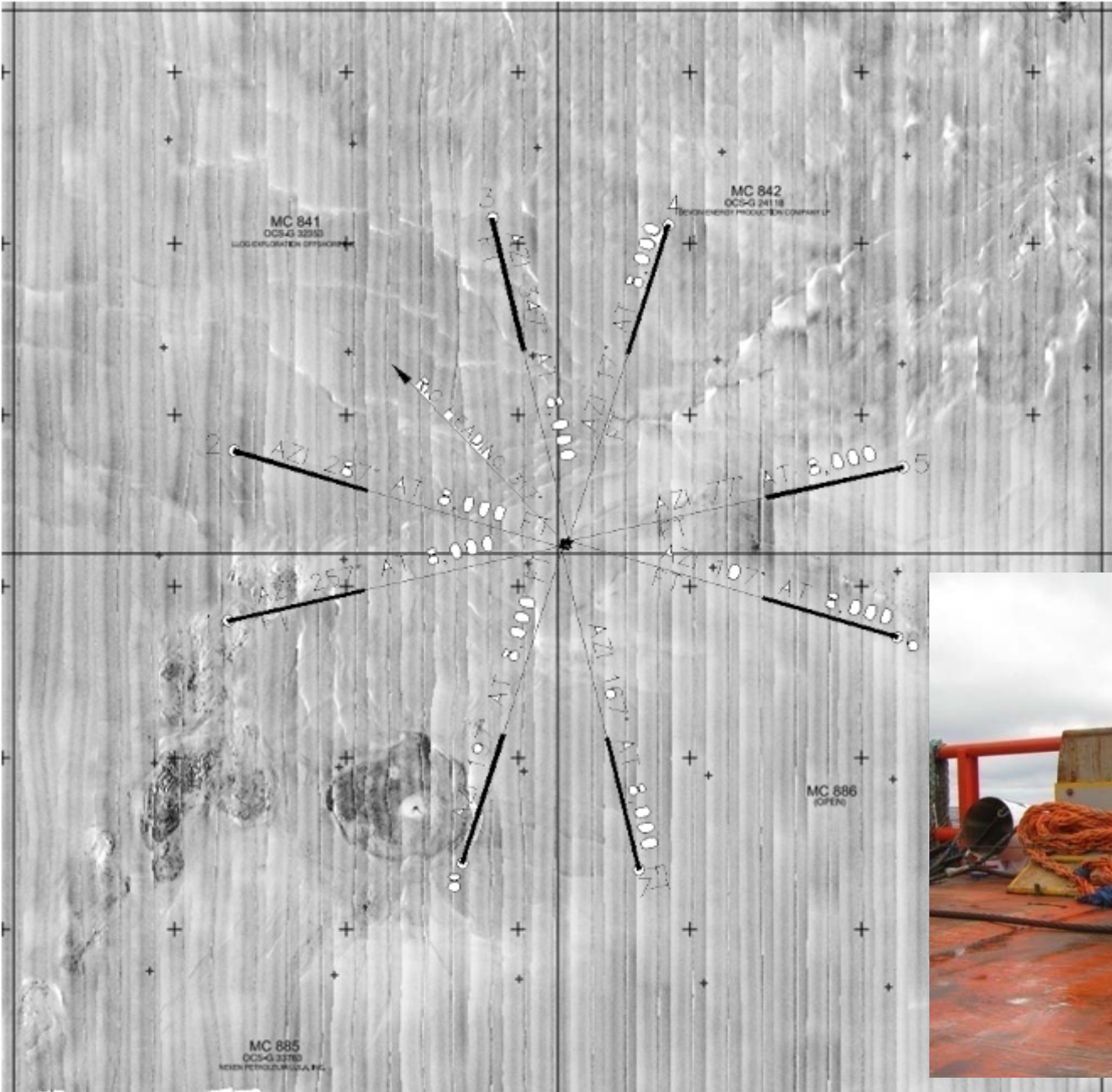


Deepwater Bottom Impacts

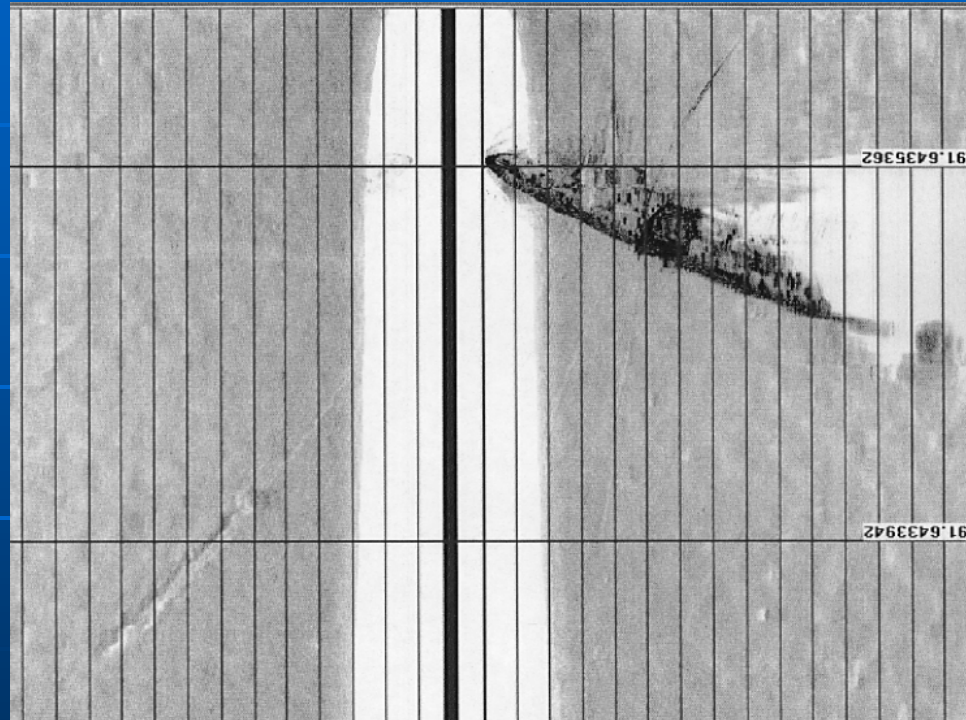


Photograph by Author

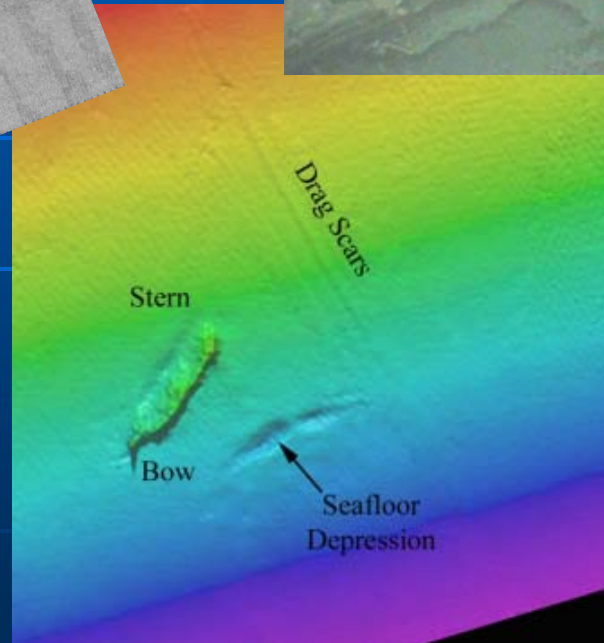
Deep Water Rig Anchor Pattern



S.S. Gulfstag, WWII-era



Viosca Knoll Wreck



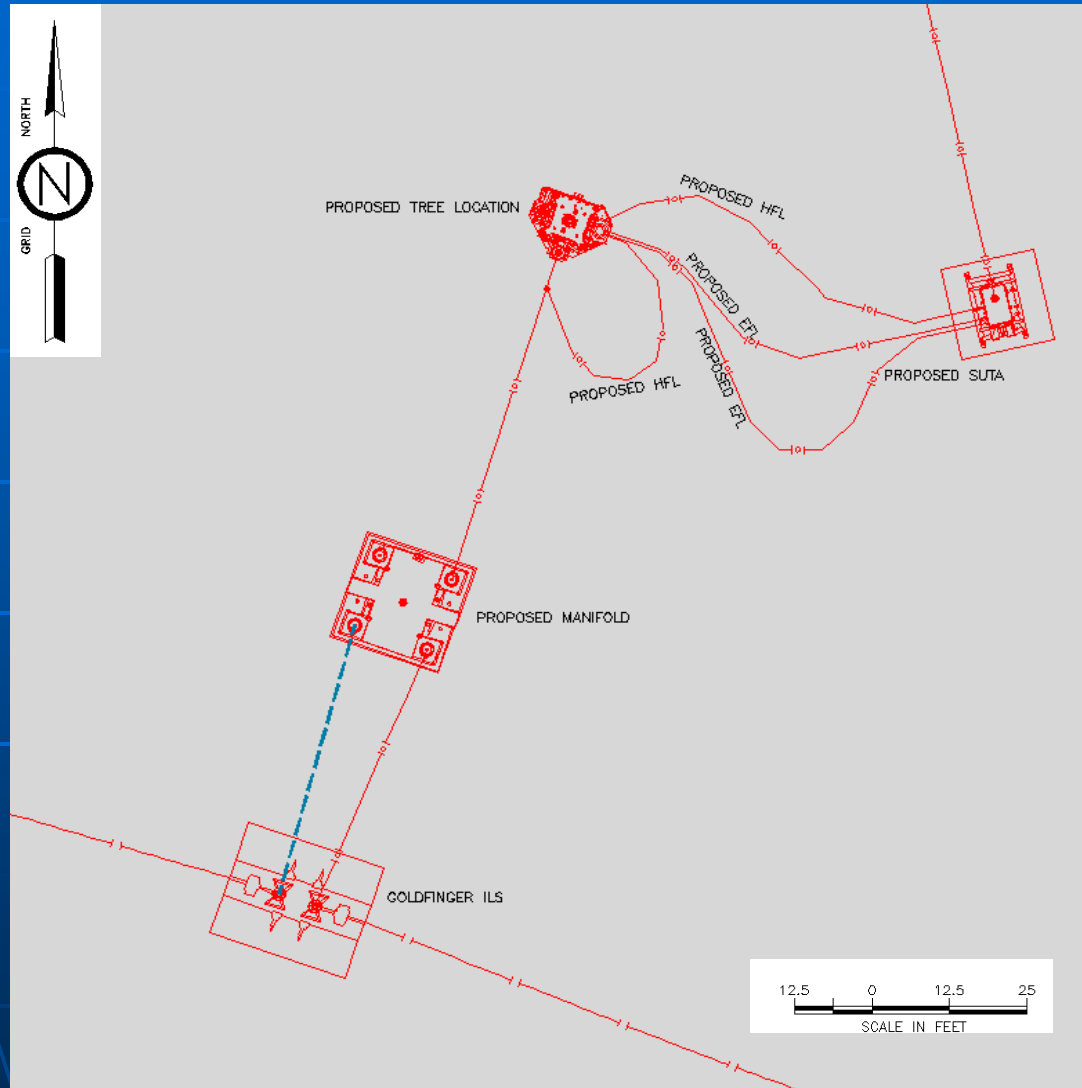
Courtesy Dr. Christopher Horrell, US Department of the Interior BOEM/BSEE
Data Acquired by Fugro GeoServices, Inc (left), C&C Technologies, Inc. (middle & right)

Production Wells



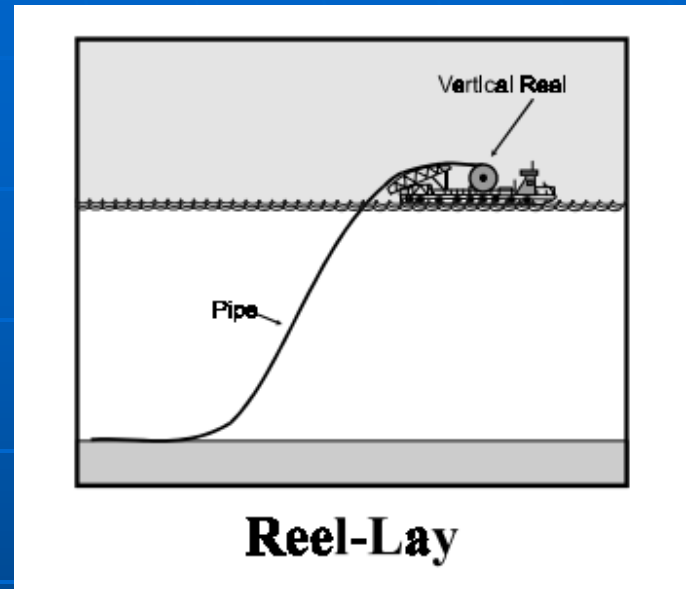
Photographs Courtesy Tesla Offshore

Well Site Schematic

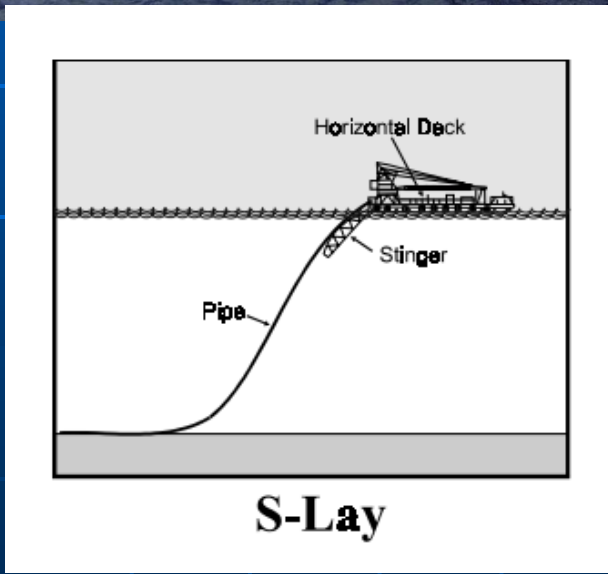


Courtesy ENI Petroleum

Pipeline Installation



Reel-Lay



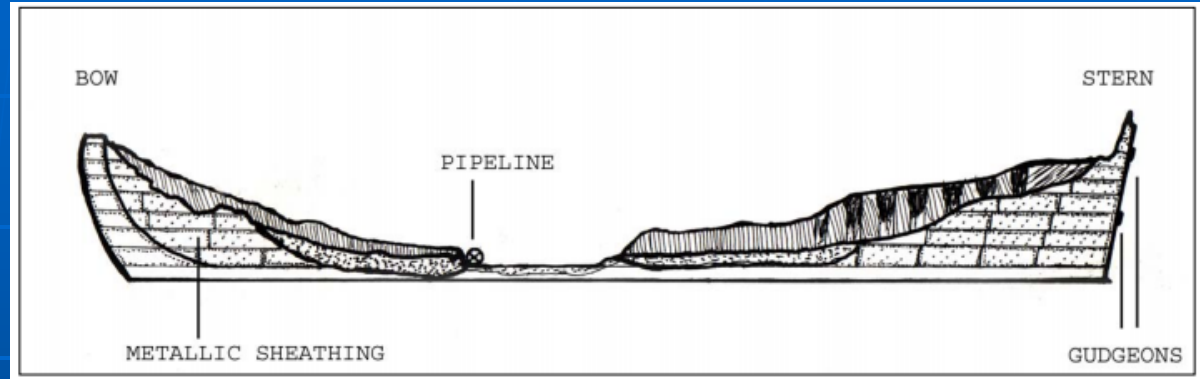
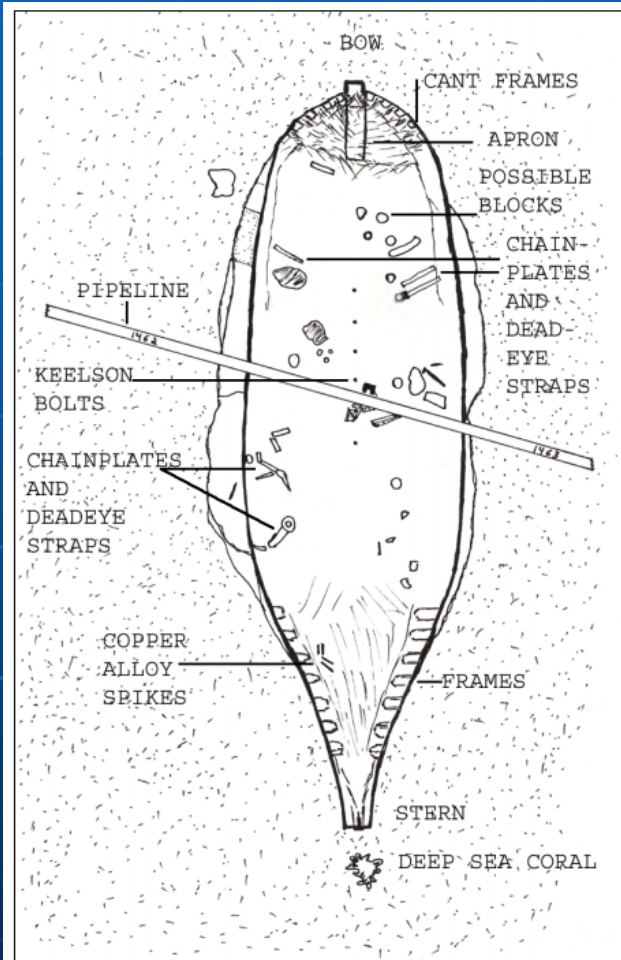
S-Lay



Mica Wreck, early 19th century



Mica Wreck, early 19th century



Ancillary Activities



Seafloor Debris from Platform Site



Unregulated Activities

